ness to treatments. Typical outputs from these simulations are patient functional status, life years, quality-adjusted life years, and associated costs, all of which can be appropriately discounted. The output information is presented in the form of distributions which can be used to estimate mean or median values and confidence intervals for the outcomes of interest. These results can be used to compute cost-effectiveness ratios and other drug value measures. Monte Carlo disease simulation also allows decision makers to address the question of risk associated with smaller populations that may not tend to the "average" results generated by Markov models or simulations of large populations. In this workshop, we describe how to create a Monte Carlo simulation model and how different types of uncertainty can be incorporated into the model. We will briefly compare and contrast Monte Carlo and Markov simulation techniques. Discussion topics will be illustrated and motivated by an HIV/AIDS model of the effect of combination antiretroviral therapy on viral load and CD4 progression. This workshop should be beneficial to outcomes researchers and health care decision makers who need to incorporate uncertainty about the natural history of a disease and the impact of alternative disease management strategies for individual patients into their drug value analyses.

MM2

DESIGNING COMPUTER MODELS TO CONVEY COST-EFFECTIVENESS ANALYSES RESULTS

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Results from economic analyses of the effectiveness of new therapeutic innovations determine whether a new product will be reimbursed by a managed care organization or government agency. Often, the results of these economic analyses are presented as formal empirical analyses in scientific journal articles. With the pace of medical innovations submitted for approval on a payers fee schedule or formulary list ever increasing, it is important to convey the results of analysis as effectively and efficiently as possible. In response, interactive computer models have been developed to present the key findings of an economic analysis. Ideally, these models allow a potential buyer to customize a scientific analysis to determine their own reservation price for a new product. The quality and costs of these software applications vary greatly. Given the resources expended to develop these models and time to produce them, it useful to examine the features of cost-effective "laptop model" design. This workshop will review an inventory of the features of laptop models. Participants will gain an understanding of the development process and costs for developing these models from the conceptual development phase to production of a stand-alone software application. A checklist of critical ingredients for software development will be reviewed with a special focus on role of a multidisciplinary development team and the capital resources required. A review of the discordance between scientists, biomedical manufactrures, software applications developers and potential clients and methods to gain consensus to build the application will be discussed. Examples from Project HOPE's and other firms' software development initiatives will be demonstrated as successful applications currently in use. Participants with a basic knowledge of computer applications, cost-effectiveness methods, and systems analysis will likely gain the most from this workshop.

MM3

DEVELOPMENT OF DRUG USE PERFORMANCE MODELS AS MEASURES OF PATIENT CARE

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Combining the measurement of traditional drug utilization and other health care resources can provide a good measure of performance within a health care plan, but they have not been extensively developed. Following the workshop, participants should be able to select medical conditions in a population that are appropriate for drug usage performance measures, develop a set of drug-based performance measures from well-established treatment guidelines, develop appropriate denominators for the performance measures and monitor the results within and across health care plans. A template and the criteria development process for two drug-based performance sets (asthma and otitis media) will be presented. The role of performance measures to evaluate trends and to describe the consequences of implementing managed care to a traditional Medicaid program will be discussed. Providers and insurers of health care who are responsible for quality of care indicators or the drug and disease evaluation process will benefit from attending this workshop.

MM4

RECONCILING DECISION MODELS WITH THE REAL WORLD: THE COST-EFFECTIVENESS OF ERYTHROPOIETIN FOR ESRD-RELATED ANEMIA

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The choice of data used in decision modeling of health care interventions divides analysts into two groups: those who favor randomized clinical trial (RCT) data and those who prefer "real world" data. This decision may have serious consequences if the end result is to inform health care policy. This workshop employs a case study to (1) show how differences in the reality of clinical practice and the rigor of RCTs can lead to biases when decision models use RCT data to evaluate policy issues and (2) provide a method of updating decision models with claims/outcomes data to overcome this bias. We highlight